LEGISLATIVE SERVICES AGENCY
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ADMINISTRATIVE RULE
FISCAL IMPACT STATEMENT

PROPOSED RULE: 00-137 **DATE PREPARED:** Feb 2, 2001
STATE AGENCY: Department of Environmental Management **DATE RECEIVED:** Dec 22, 2000

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Digest of Proposed Rule: These draft rules require reductions of nitrogen oxide from cement kilns, electricity generating units, and large industrial boilers.

Governmental Entities: **State:** The proposed rule does not place unfunded mandates on any state agency.

Local: With respect to local units, only one local unit owns a utility. Compliance costs for Richmond Power and Light, owned by the City of Richmond, are estimated at between $1.35 M for total ozone season costs. (See below.) The facility is also subject to a federal NOx reduction mandate. The costs must be incurred to comply with the federal rule

Regulated Entities: The bulk of the costs, estimated below, will be incurred by electric utilities. As a result, it is possible that electric rates could increase by an estimated 6% to7%. The program, however, does provide for multi-state trading of allowances which could reduce costs. Ongoing deregulation of the electric industry could also affect costs.

IC 13-14-9.5-2 provides that an administrative rule adopted under IC 14-14-9 expires January 1 of the seventh year after the year in which the rule takes effect, unless the rule contains an earlier expiration date.
Over the seven-year life of the rule, capital costs would equal $1,420 M, while ozone season costs are estimated at $1,860 M. An explanation of the above estimates follow.

The amount of emissions control that would be needed was estimated by considering projected heat inputs based on future energy needs and the baseline emissions rates. Both U.S. EPA and utilities' projections were considered. Once projected heat inputs and emission rates were established, control mechanisms were considered. Two types of flue gas treatment controls were considered: selective catalytic control systems (SCRs) and selective non-catalytic control systems (SNCRs). Both remove NOx from flue gas. A least-cost control strategy for each utility, consisting of the application of these controls on units yielding relatively lower costs per ton of NOx removed, was developed. Considering an emissions trading program, an estimated 32 SCRs and 13 SNCRs would be needed.

The proposed rule will reduce NOx emission from 156,419 tons per ozone season to 45,952 tons from the following electricity steam generating unit companies:

1. American Electric Power
2. Cinergy
3. Hoosier Energy
4. Indiana-Kentucky Electric Company
5. Indiana Municipal Power Agency
6. Indianapolis Power and Light
7. Northern Indiana Public Service Company
8. Richmond Power and Light
9. Southern Company
10. Southern Indiana Gas and Electric Company.

The above utilities may contain one or more units that will be affected by the rule. These units will experience an increase in costs associated with installing, operating, and maintaining nitrogen oxides emissions control devices. If regulated entities prove to the Indiana Utility Regulatory Commission that they have complied with the rule in the most cost efficient manner, they may recover costs. Based on a study conducted by the State Utility Forecast Group at Purdue University, retail rates could increase by 6% to 7% if utilities seek reimbursement for increased costs associated with compliance to the rule. Other indirect impacts include an increase in demand for new workers to construct, install, operate, and maintain the pollution control equipment. This increase in employment will result in an indeterminable increase in income taxes.

Total capital costs are estimated at $1,396 M.
Total annual ozone season costs are estimated at $260 M.

Industrial, Commercial, and Institutional Steam Generating Units. (ICIs)

Eight facilities with ICIs currently operating in Indiana would be affected by the rule:

1. Alcoa
2. Amoco-Whiting
3. Bethlehem
4. Inland Steel
5. Indianapolis Power and Light
6. LTV Steel
7. New Energy Corporation
8. U.S. Steel.
9. National Steel.

For ICIs, combustion modification controls that are less expensive than SCRs and SNCRs could be employed. However, some of these units will incur additional monitoring costs. U.S. EPA estimated the annual cost of operating continuous emission monitoring at $32,300 in 1990 dollars. Currently several facilities monitor NOx emissions using continuous emissions monitoring systems (CEMS), so no additional costs would be incurred for these units. However, 16 additional CEMS would be needed for units currently without monitoring required by rule.

Capital costs were estimated at $21 M. Total annual ozone season costs are estimated at $4.8 M.

NOx Control Costs for Cement Plants.

The proposed rule will affect three cement industries in Indiana with a total of eight kilns. The industries are

listed below:

Essroc	4 kilns
Lehigh	3 kilns
Lone Star	1 kiln

Several control technologies can be applied to cement kilns to control NOx emissions. Low NOx burners (LNBs) can be applied to all types of kilns. Two kilns will be equipped with LNBs in 2001 and one plant is currently equipped with an LNB. Five kilns have NOx CEMS, but these kilns will require monitoring and reporting.

Assuming that LNBs are used, total capital costs are estimated between $2.8 and $5.7 M. Total ozone season costs are estimated at between $876,634 to $1.4 M.

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